

Status of Claims

1 (currently amended). A body for a refuse collection vehicle having a frame, said body comprising:

- (a) a hopper compartment mounted on the frame and having:
 - (i) a pair of opposing sidewalls defining a hopper compartment width;
 - (ii) a closed forward end;
 - (iii) an open rear end; and
 - (iv) a hopper compartment floor at a first level;
 - (b) a storage compartment mounted on the frame adjacent to and to the rear of the hopper compartment, said storage compartment having:
 - (i) a pair of opposing sidewalls defining a storage compartment width;
 - (ii) a forward end that opens into the hopper compartment;
 - (iii) a rear end having a tailgate mounted thereon; and
 - (iv) a storage compartment floor at a second level, said second level being raised above the first level;
 - (c) a transition floor between the hopper compartment floor at the first level and the storage compartment floor at the second level;
 - (d) a crusher panel that is adapted to apply a downwardly directed compressive force to refuse material in the hopper compartment and to sweep said refuse material from the hopper compartment into the storage compartment;
 - (e) means for removing refuse material from the storage compartment;
- wherein said crusher panel is not attached to said means for removing refuse material from the storage compartment.

2 (original). The body of claim 1 wherein the crusher panel has a pivot end and a sweep end, said pivot end being pivotally mounted so that said crusher panel may be pivoted about a crusher pivot axis at its pivot end between a first orientation in which the sweep end is generally disposed above the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor.

3 (original). The body of claim 2 wherein the transition floor diverges away from the sweep end of the crusher panel as the sweep end of the crusher panel approaches the storage compartment floor during pivoting of the crusher panel.

4 (currently amended). The body of claim 2:

- (a) wherein the crusher panel is mounted adjacent to the rear end of the hopper compartment;
- (b) which body includes means for pivoting the crusher panel about the crusher pivot axis between said first orientation and said second orientation to apply a downwardly directed compressive force to refuse material in the hopper compartment, and to sweep said refuse material from the hopper compartment into the storage compartment.

5 (original). The body of claim 4 wherein the means for pivoting the crusher panel about the crusher pivot axis comprises:

- (a) a crusher panel actuator; and
- (b) an attachment mechanism for attaching one end of the crusher panel actuator to the crusher panel, said mechanism comprising a linkage system that permits the crusher panel to pivot between the first orientation and the second orientation through an arc of about 250°.

6 (original). The body of claim 1 which includes a reciprocating packer that is mounted in the forward end of the hopper compartment and is adapted to move refuse from the forward end of the hopper compartment towards the rear end of the hopper compartment so that it may be compacted and swept by the crusher panel, which reciprocating packer comprises:

- (a) a packer panel;
- (b) an actuator that is attached to the packer panel and adapted to move the packer panel between:
 - (i) a retracted position which is in front of the crusher panel when said crusher panel pivots between the first orientation and the second orientation; and
 - (ii) an extended position which is adjacent to the transition floor.

7 (original). The body of claim 1 wherein the means for removing refuse material from the storage compartment comprises a hoist that is adapted to raise the forward end of the storage compartment above the rear end thereof.

8 (original). The body of claim 7 wherein the hoist is adapted to raise the forward end of the storage compartment so that the storage compartment floor is generally disposed at an angle of no more than about 35° from the horizontal.

9 (original). The body of claim 2 wherein the means for removing refuse material from the storage compartment comprises an ejector mechanism which includes:

- (a) an ejector panel having an upper end and a lower end, said upper end being mounted between the sidewalls of the storage compartment for axial movement between a forward position and a rear position;
- (b) means for moving the upper end of the ejector panel between the forward position and the rear position.

10 (currently amended). The body of claim 9:

- (a) wherein the ejector panel is pivotally mounted about an ejector pivot axis at its upper end for pivotal movement between:
 - (i) a retracted orientation in which the lower end is disposed adjacent to the pivot end of the crusher panel when the ejector panel is in the forward position; and

- (ii) an extended orientation in which the lower end is disposed rearwardly from the retracted position;
- (b) wherein the upper end of the ejector panel may be moved between the forward position and the rear position when the ejector panel is in the extended orientation;
- (c) which body includes an ejector actuator that is located and arranged:
 - (i) to pivot the ejector panel about the ejector pivot axis between the retracted orientation and the extended orientation; and
 - (ii) to move the upper end of the ejector panel between the forward position and the rear position.

11 (original). The body of claim 10 wherein the crusher panel and the ejector panel are located and arranged so that pivoting of the ejector panel from the retracted orientation to the extended orientation while the crusher panel is in the second orientation will sweep the lower end of the ejector panel across the crusher panel.

12 (original). The body of claim 10 wherein the ejector mechanism includes an ejector over-center lock that is located and arranged to releasably lock the ejector panel in the extended orientation.

13 (original). The body of claim 10 which includes an ejector cylinder drift lock that releasably locks the ejector panel in the retracted orientation.

14 (original). The body of claim 13 wherein the ejector cylinder drift lock includes:

- (a) a pivot pin;
- (b) a latch which is attached to the pivot pin and adapted to releasably engage with the ejector panel;
- (c) an air cylinder having:
 - (i) a piston rod which is attached to the pivot pin;
 - (ii) a spring that is adapted to bias the piston rod into an extended position in which the latch engages the ejector panel;

wherein the air cylinder is arranged, configured and adapted to actuate to overcome the bias of the spring so as to disengage the latch from the ejector panel prior to actuation of the ejector actuator.

15 (currently amended). ~~The A body of claim 10 wherein the ejector mechanism includes~~
for a refuse collection vehicle having a frame, said body comprising:

- (a) a hopper compartment mounted on the frame and having:
 - (i) a pair of opposing sidewalls defining a hopper compartment width;
 - (ii) a closed forward end;
 - (iii) an open rear end; and
 - (iv) a hopper compartment floor at a first level;
- (b) a storage compartment mounted on the frame adjacent to and to the rear of the
hopper compartment, said storage compartment having:
 - (i) a pair of opposing sidewalls defining a storage compartment width;

- (ii) a forward end that opens into the hopper compartment;
 - (iii) a rear end having a tailgate mounted thereon; and
 - (iv) a storage compartment floor at a second level, said second level being raised above the first level;
- (c) a transition floor between the hopper compartment floor at the first level and the storage compartment floor at the second level;
- (d) a crusher panel that is adapted to apply a downwardly directed compressive force to refuse material in the hopper compartment and to sweep said refuse material from the hopper compartment into the storage compartment, said crusher panel having a pivot end and a sweep end, said pivot end being pivotally mounted so that said crusher panel may be pivoted about a crusher pivot axis at its pivot end between a first orientation in which the sweep end is generally disposed above the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor;
- (e) an ejector panel having an upper end and a lower end, said upper end:
 - (i) being mounted between the sidewalls of the storage compartment for axial movement between a forward position and a rear position;
 - (ii) pivotally mounted about an ejector pivot axis for pivotal movement of the ejector panel between a retracted orientation in which the lower end is disposed adjacent to the pivot end of the crusher panel when the ejector panel is in the forward position and an extended orientation in which the lower end is disposed rearwardly from the retracted position;

said ejector panel having a pair of pivot pins mounted on opposite sides at the upper end thereof, said pins being co-axial with the ejector pivot axis;

~~(b)~~(f) a pair of ejector guide tracks which are mounted opposite each other and disposed axially on the opposing sidewalls of the storage compartment;

~~(e)~~(g) an ejector guide frame assembly having a pair of ejector guide frames which are mounted on opposite sides of the ejector panel, said guide frames being joined by a guide frame support extending between them, wherein said guide frame assembly:

(i) includes a pin socket within which a pivot pin will pivot as the ejector panel is pivoted between the retracted orientation and the extended orientation;

(ii) is adapted to move along the ejector tracks as the upper end of the ejector panel is moved axially between the forward position and the rear position;

(h) an ejector actuator that is located and arranged:

(i) to pivot the ejector panel about the ejector pivot axis between the retracted orientation and the extended orientation; and

(ii) to move the upper end of the ejector panel between the forward position and the rear position when the ejector panel is in the extended orientation.

16 (original). The body of claim 15 wherein the ejector mechanism includes an ejector slide lock that is located and arranged on one of the ejector guide tracks near the open end of the storage compartment so as to releasably lock the ejector guide frame assembly to the ejector guide track when the upper end of the ejector panel is at the forward position.

17 (original). The body of claim 16 wherein the ejector slide lock is associated with the ejector guide frame assembly and includes a linkage system that is mounted, arranged and configured so that when the ejector actuator has pivoted the ejector panel from the retracted orientation to the extended orientation, the slide lock will disengage so that the ejector panel may be moved from the forward position towards the rear position.

18 (original). The body of claim 16 wherein the ejector slide lock is associated with the ejector guide frame assembly, which assembly includes the following components:

- (a) a base link having a first end and a second end, said first end being pivotally mounted on the forward side of the ejector panel;
- (b) a support link having a first end and a second end, said first end being pivotally mounted to the second end of the base link and said second end being pivotally mounted on the guide frame support;
- (c) an intermediate link having a first end and a second end, said first end being pivotally mounted to the support link;
- (d) a release link that is pivotally attached to one of the guide frames, which release link has a base end and a catch engagement end, said base end being pivotally mounted to the second end of the intermediate link;
- (e) a catch link that is pivotally attached to the guide frame to which the release link is attached, said catch link having a catch end that is adapted to engage the ejector guide stop and a base end that is adapted to be engaged by the catch engagement end of the release link;

wherein the components of the ejector slide lock and the ejector actuator are mounted, arranged and configured so that as the ejector actuator pivots the ejector panel from the retracted position to the extended position, the catch link will disengage so that the ejector panel may be moved from the forward position towards the rear position.

19 (original). A refuse collection vehicle having a frame with a front end and a rear end, an operator's cab at the front end of the frame, and a drivetrain for driving said vehicle across a roadway, said vehicle comprising:

- (a) a hopper compartment mounted on the frame behind the cab, said hopper compartment comprising:
 - (i) a pair of opposing sidewalls defining a hopper compartment width;
 - (ii) a closed forward end;
 - (iii) an open rear end; and
 - (iv) a hopper compartment floor at a first level;
- (b) a storage compartment mounted on the frame adjacent to and to the rear of the hopper compartment, said storage compartment comprising:
 - (i) a pair of opposing sidewalls defining a storage compartment width, said storage compartment width being no less than the hopper compartment width;
 - (ii) a forward end that opens into the hopper compartment;
 - (iii) a rear end having a tailgate mounted thereon; and
 - (iv) a storage compartment floor at a second level, said second level being raised above the first level;

- (c) a transition floor between the hopper compartment floor at the first level and the storage compartment floor at the second level;
- (d) a crusher assembly comprising:
 - (i) a header tube which is mounted between the sidewalls of the hopper compartment above the floor at the first level and adjacent to the transition floor;
 - (ii) a crusher panel having a pivot end and a sweep end, said pivot end being pivotally mounted on the header tube so that said crusher panel may be pivoted about a pivot axis at its upper end between a first orientation in which the sweep end is generally disposed above the pivot end and a second orientation in which the sweep end is adjacent to the storage compartment floor;
 - (iii) a crusher panel actuator for pivoting the crusher panel about its pivot axis between said first orientation and said second orientation;

wherein pivoting said crusher panel between said first orientation and said second orientation while refuse material is in the hopper compartment will cause said crusher panel to:

- (iv) apply a downwardly directed compressive force to said refuse material in the hopper compartment; and
- (v) sweep said refuse material from the hopper compartment into the storage compartment;

- (e) an ejector panel having an upper end and a lower end, said upper end being mounted between the sidewalls of the storage compartment for axial and pivotal movement therein so that:
 - (i) the ejector panel may be pivoted about an ejector pivot axis at its upper end between a retracted orientation in which the lower end is disposed adjacent to the header tube and an extended orientation in which the lower end is disposed rearwardly from the retracted position;
 - (ii) the upper end of the ejector panel may be moved axially between a forward position and a rear position;
- (f) an ejector actuator that is adapted:
 - (i) to pivot the ejector panel about the ejector pivot axis between the retracted orientation and the extended orientation; and
 - (ii) to move the upper end of the ejector panel between the forward position and the rear position.

20 (original). The refuse collection vehicle of claim 19 which includes an apparatus for acquiring, lifting and transferring a container so as to deposit the contents of the container in the hopper compartment, said apparatus being mounted on the frame in front of the hopper compartment.